logic controls

User's Manual

SB-9015

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All trademarks are property of their respective owners

Liability Disclaimer

In no event will the manufacturer be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or inability to use the product or documentation, even if advised of the possibility of such damages.

Regulatory Information

FCC Notices

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the Federal Communications Commission (FCC) Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Increase the separation between the equipment and the receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer or an experienced radio or television technician for help.

This device complies with Part 15 (B) of the FCC Rules. Operation is subject to the following two conditions:

1) this device may not cause harmful interference and

2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS DEVICE. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE DEVICE.

CE Notice

This device complies with **EMC Directive 2004/108/EC** issued by the Commission of the European Community.

WEEE Notice

The **WEEE** mark applies only to countries within the European Union (EU) and Norway.
This appliance is labeled in accordance with **European Directive 2002/96/EC** concerning **waste electrical and electronic equipment** (**WEEE**). The Directive determines the framework for the return and recycling of used appliances as applicable throughout the European Union. This label is applied to various products to indicate that the product is not to be thrown away, but rather reclaimed upon end of life per this Directive.

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1.

Features

- Intel® low power consumption and high performance technology
- Durable ultra-slim & robust die-casting aluminum chassis
- easy upgrade and assembly/disassembly
- 4x USB 2.0,1 x RS-485/422/232, 3x RS-232, Gigabit Ethernet port (RJ-45) and cash drawer port (6-PIN RJ-11) equipped.
- Wireless LAN supported (Optional)
- Microsoft Windows series operation system (Windows XP Home Edition, Windows XP Professional Edition and WEPOS), POS Ready and open-source Linux operation system drivers ready.

2.

Unpacking the Box

Verify that the box contains the following items.

1	SB-9015 All-in-One Touch POS System X 1
2	Power Adaptor X 1
3	Power Cord X 1
4	Driver and utility CD X 1

3.

Hardware Setup

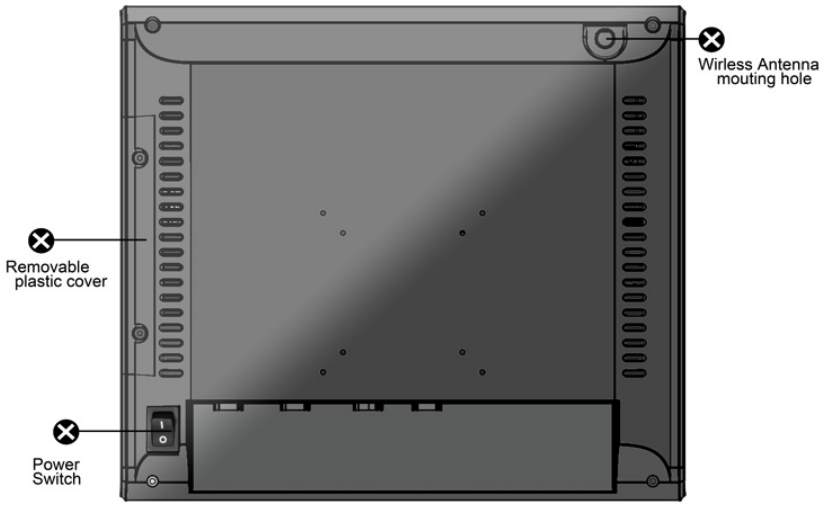
3.1. Quick Tour

Front View

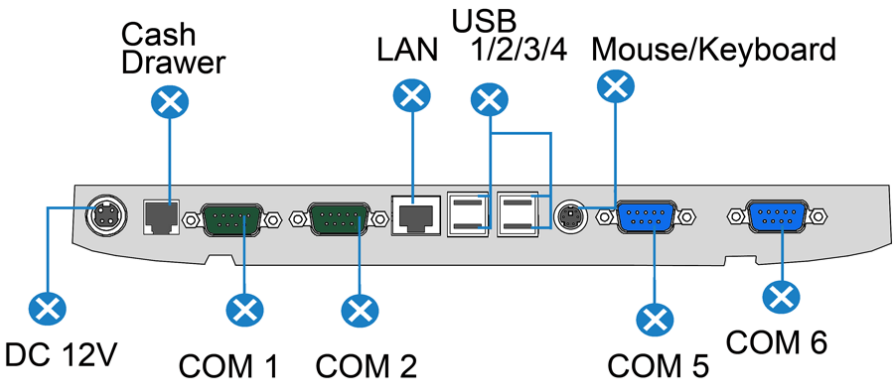
LED Indicator

	The **Power** indicator will glow green when power is on.
	The **HDD** indicator will blink green when the HDD is accessed.
	The **LAN** indicator will blink green when transferring data though the LAN.

Back View



Back Panel I/O

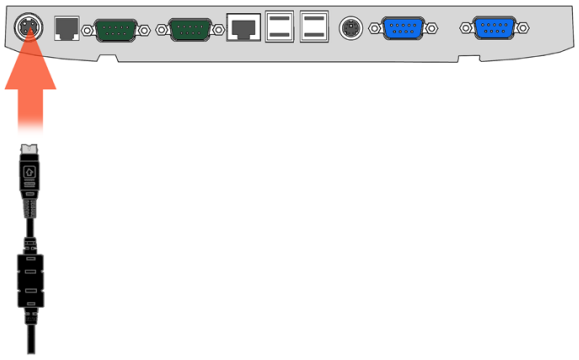


Note: For details of I/O ports on the back panel, please refer to Chapter 7 – I/O Definition.

3.3. Peripherals Installation

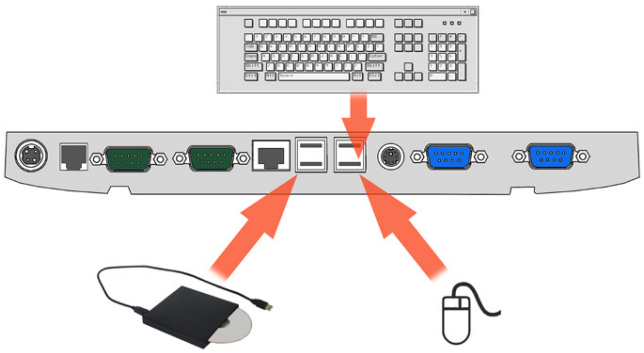
Power Adapter

Connect the 4-pin output jack of the adapter to the **DC 12V** jack on the back panel of the device.



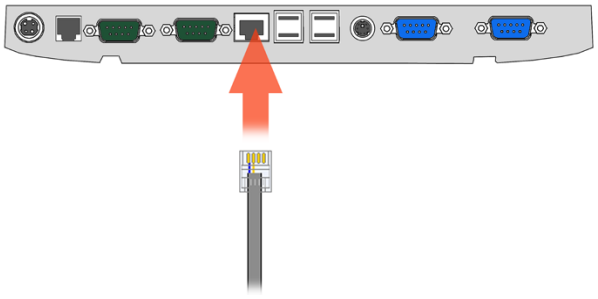
USB Mouse, USB Keyboard

Connect your USB Mouse and USB Keyboard to **USB** ports on the back panel of the device.



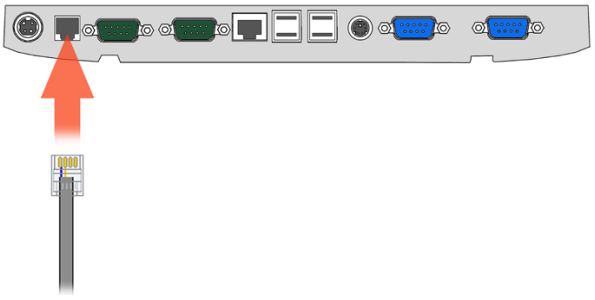
LAN Cable

Connect one end of RJ-45 LAN cable to the **LAN** port on the back panel of the device, another end to your internet device.



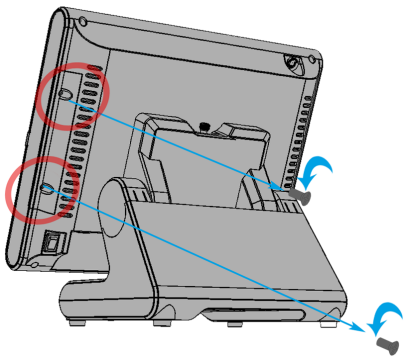
Cash Drawer

Connect one end of 6-PIN RJ-11 cable to the **Cash Drawer** port on the back panel of the device, another end to your cash drawer.

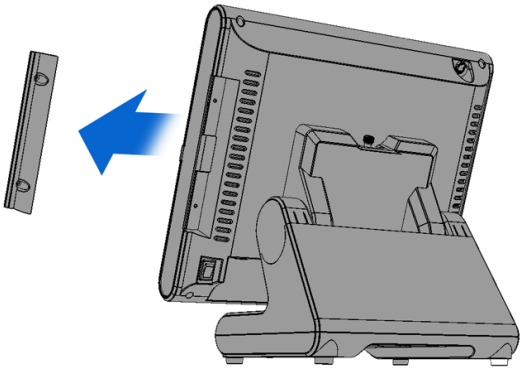


MSR

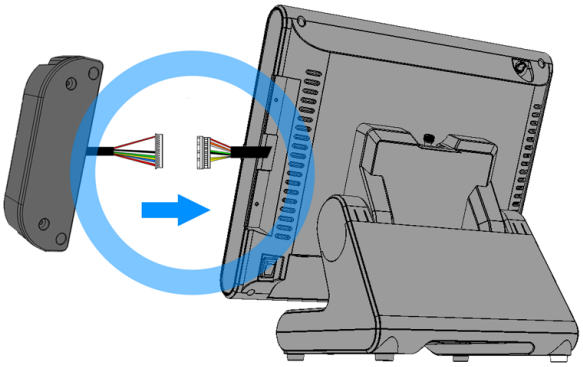
1. Remove the two screws fixing the MSR cover.



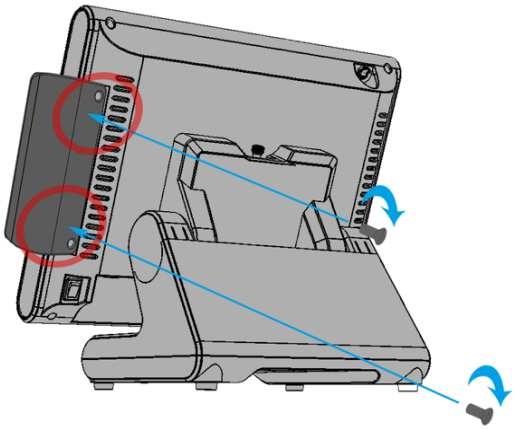
Remove the MSR cover from the device.



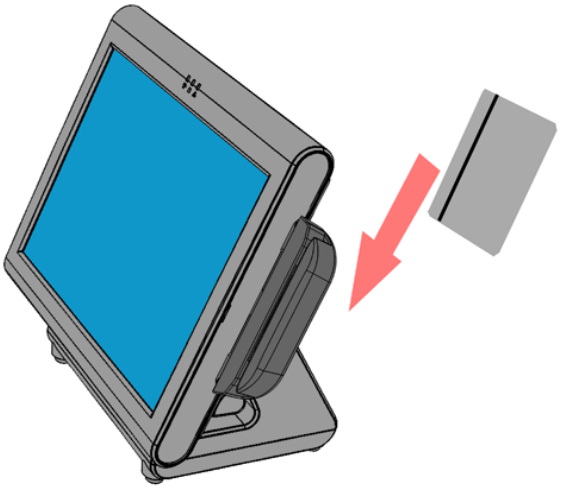
2. Connect the connector of the MSR assembly to the device.



3. Tighten the two M3 screws to fix the MSR assembly as shown below.



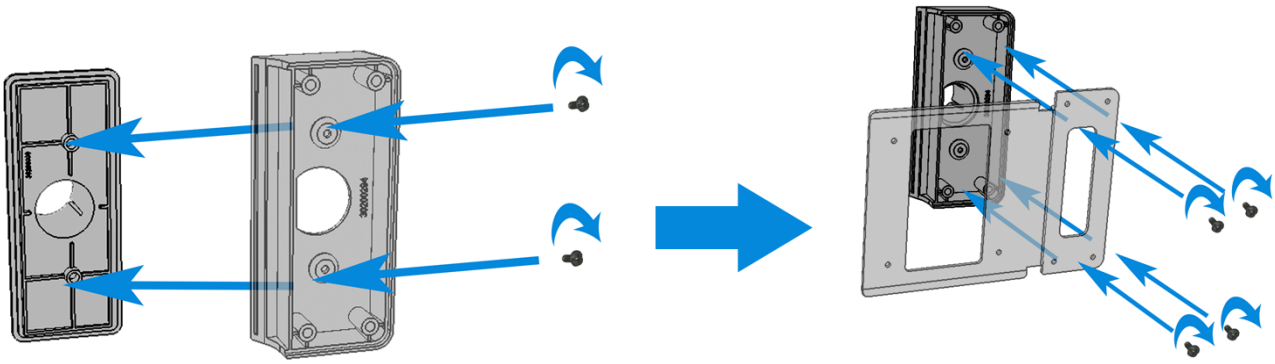
4. Finished.



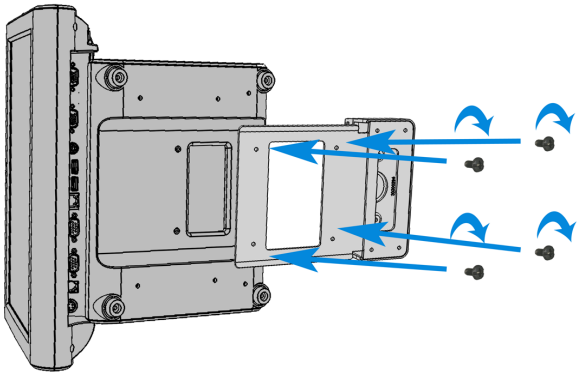
MSR

Customer Display

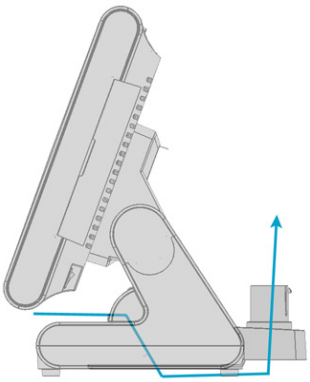
1. Assemble the customer display base as shown.



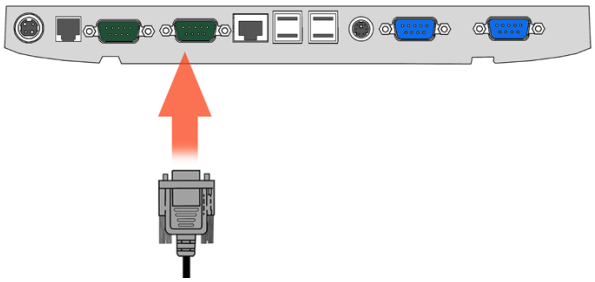
2. Install the part assembled in the Step1 to the device as shown.



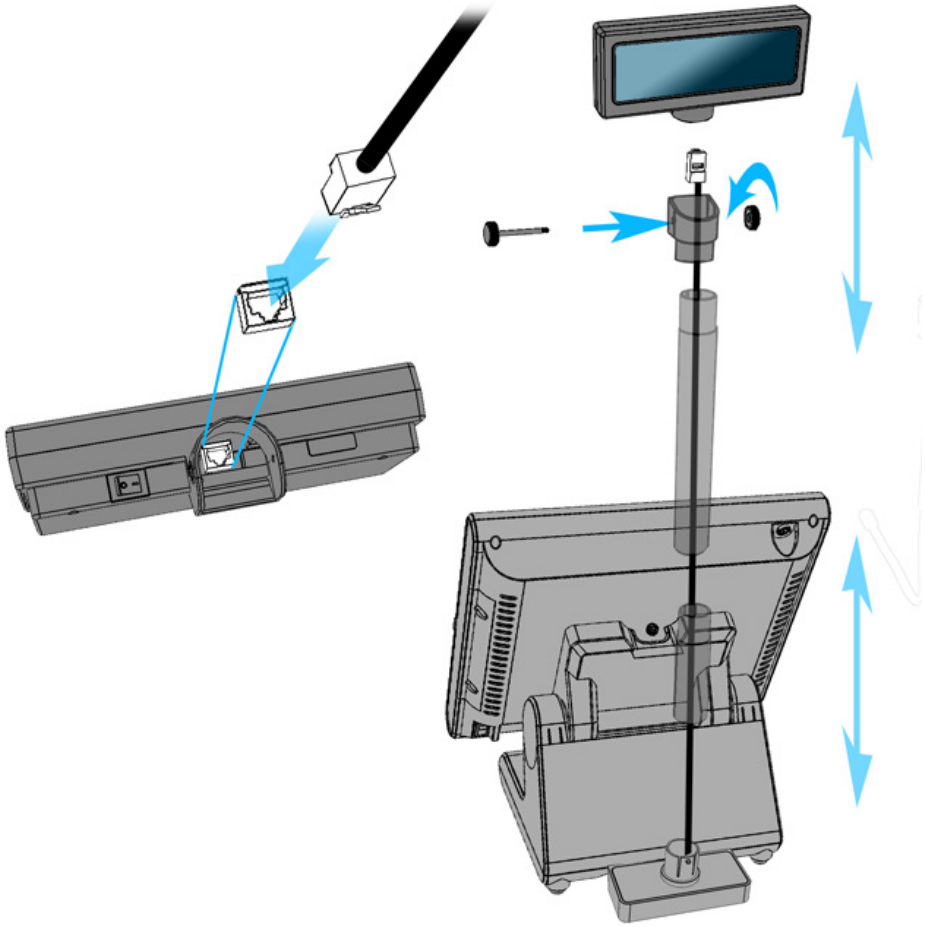
3. VFD cable are recommended to be fed in the direction as shown below.



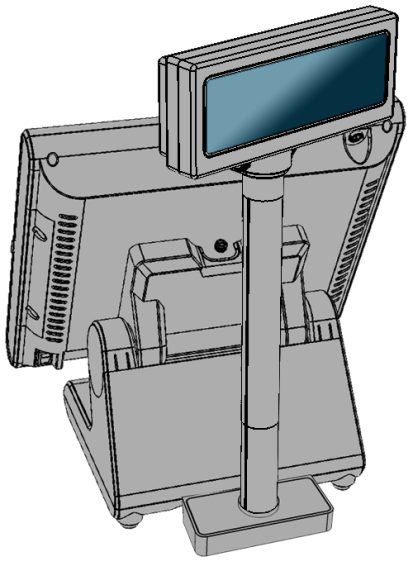
4. Connect serial connector.



5. Assemble other parts of VFD as shown below.



6. Finished.



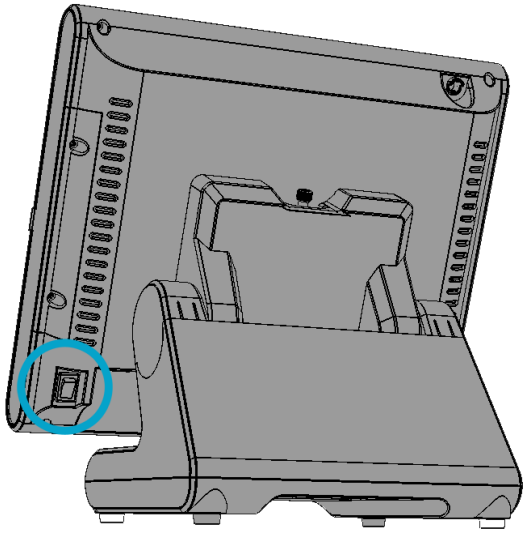
Note:

1. Be sure to adjust BIOS setting of COM port to supply 12V power.

2. For other info of VFD, Please refer to Customer Display manual.

3.4 Turn on the Device

1. Make sure all peripherals are connected properly.
2. Press and hold the power switch until the power indicator on the front panel becomes green.



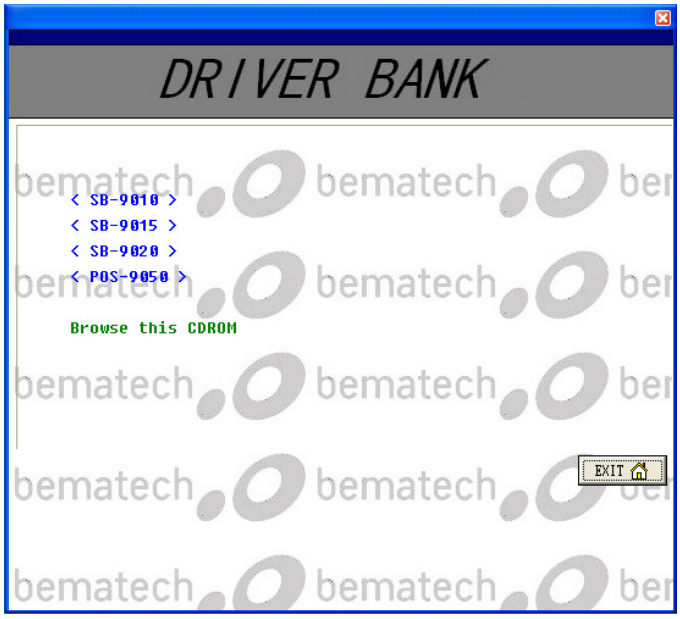
4.

Driver and Utility Installation

4.1. Before the installation

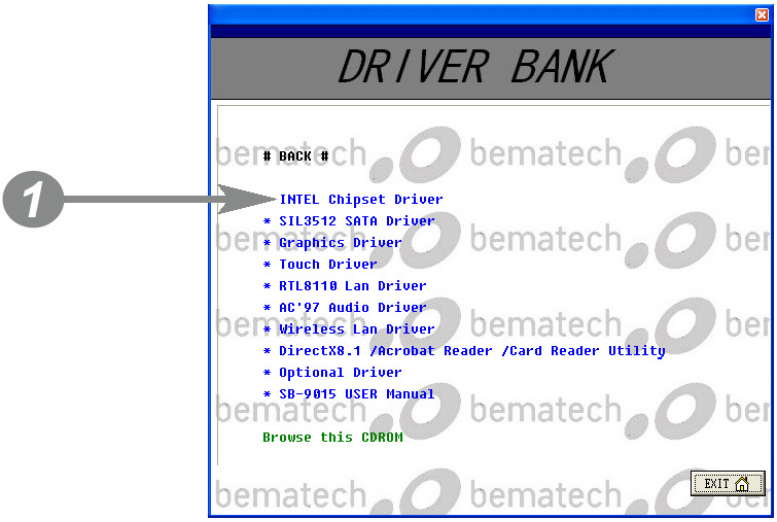
All installation procedures described below are based on Microsoft Windows XP.

1. Connect an external USB CDROM drive to the USB port and insert the driver CD and turn on the device. The program autoruns and displays the ***DRIVER BANK*** screen.
2. Click **SB-9015**.



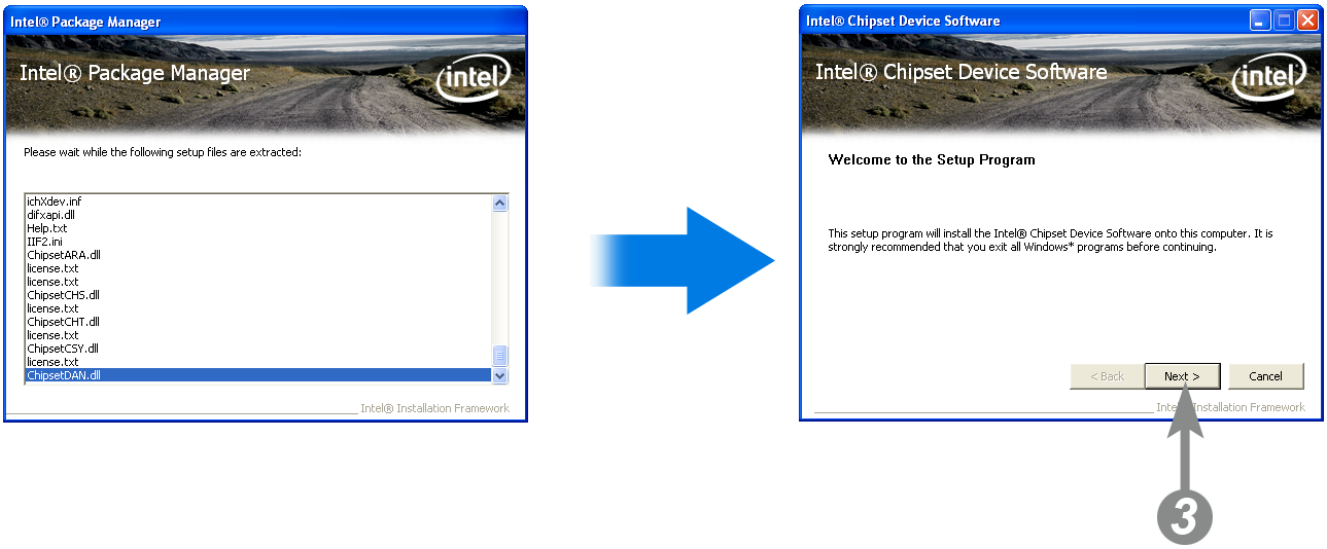
4.2. Chipset Software Installation

1. Click **INTEL Chipset Driver**.

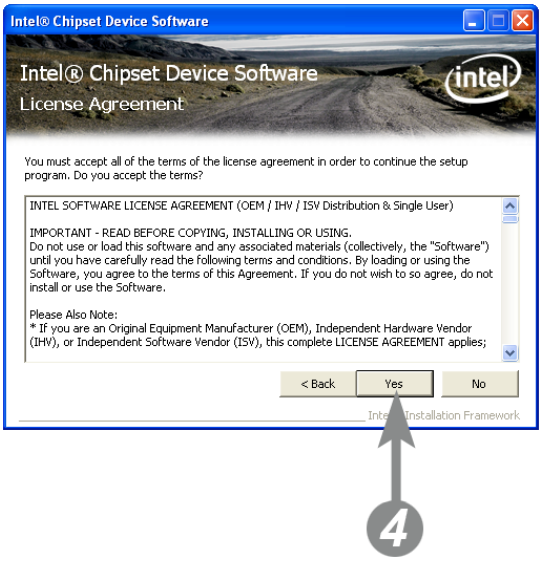


2. Wait for the installation wizard launches.

3. Click **Next**.



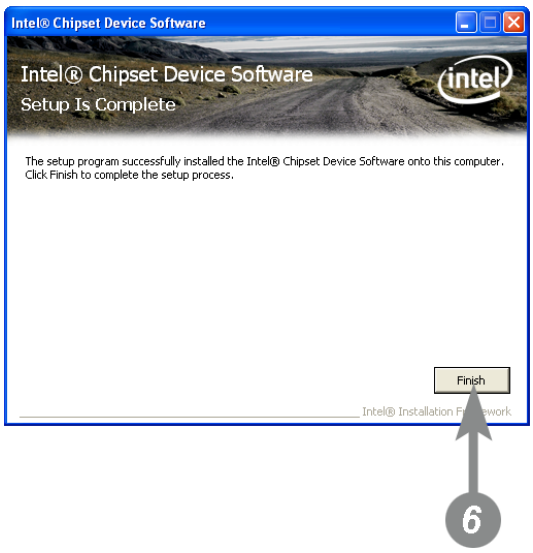
4. Read the License Agreement carefully and click **Yes**.


Intel® Chipset Device Software
Intel® Chipset Device Software
License Agreement
You must accept all of the terms of the license agreement in order to continue the setup program. Do you accept the terms?
INTEL SOFTWARE LICENSE AGREEMENT (OEM / IHV / ISV Distribution & Single User)
IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.
Do not use or load this software and any associated materials (collectively, the "Software") until you have carefully read the following terms and conditions. By loading or using the Software, you agree to the terms of this Agreement. If you do not wish to so agree, do not install or use the Software.
Please Also Note:
* If you are an Original Equipment Manufacturer (OEM), Independent Hardware Vendor (IHV), or Independent Software Vendor (ISV), this complete LICENSE AGREEMENT applies;
< Back
Yes
No
4

4. Click **Next**.

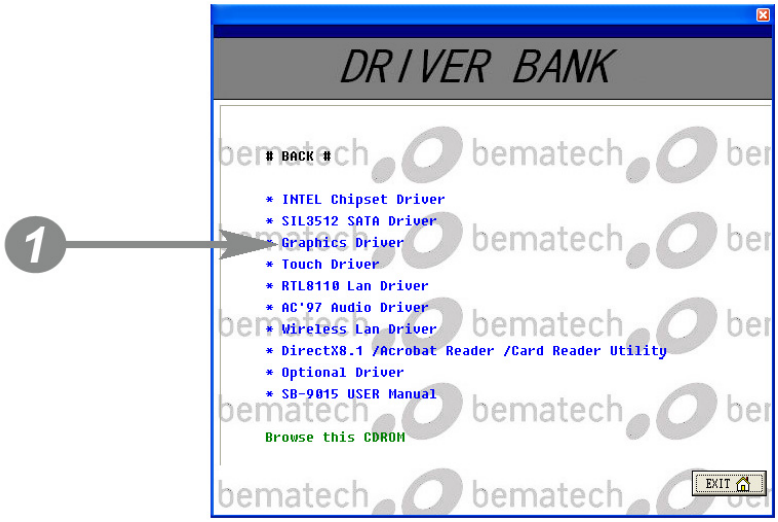
Intel® Chipset Device Software
Intel® Chipset Device Software
Readme File Information
Refer to the Readme file below to view the system requirements and installation information.
Press the Page Down key to view the rest of the file.
* Product: Intel(R) Chipset Device Software
* Release: Production Version
* Version: 8.3.0.1013
* Target Chipset#: Q33/G33/G31/P35
* Date: March 05 2007
< Back
Next >
Cancel
5

6. Click **Finish**.

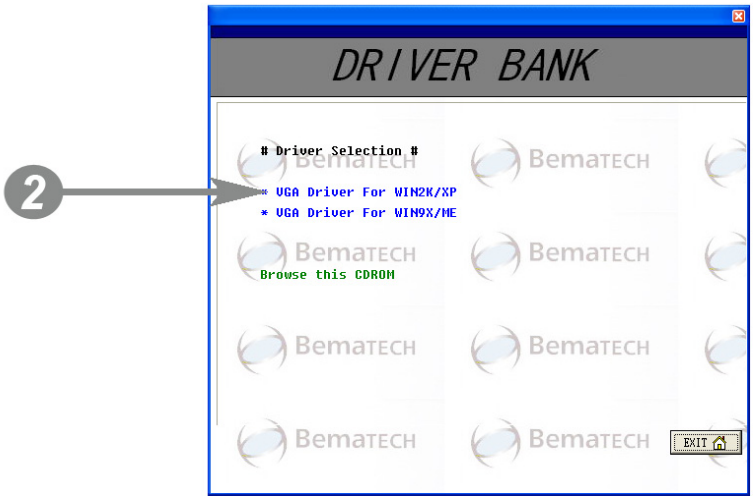

Intel® Chipset Device Software
Intel® Chipset Device Software
Setup Is Complete
The setup program successfully installed the Intel® Chipset Device Software onto this computer. Click Finish to complete the setup process.
Finish
6

4.3. VGA Driver Installation

1. Click **Graphic Driver**.



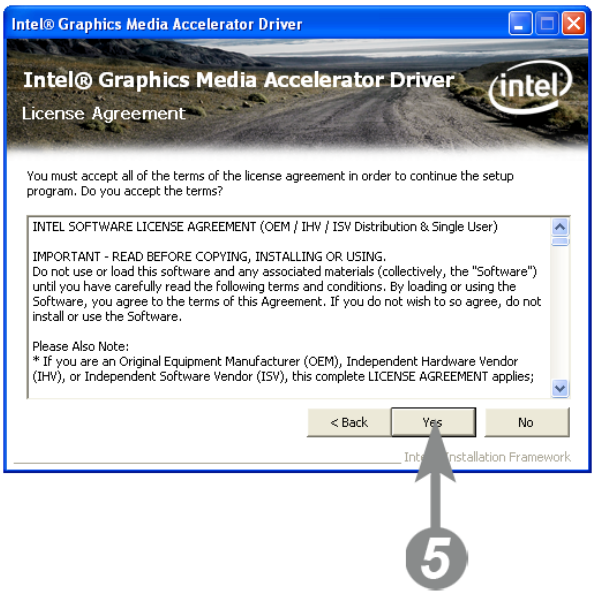
2. Click **VGA Driver for WIN2K/XP**.



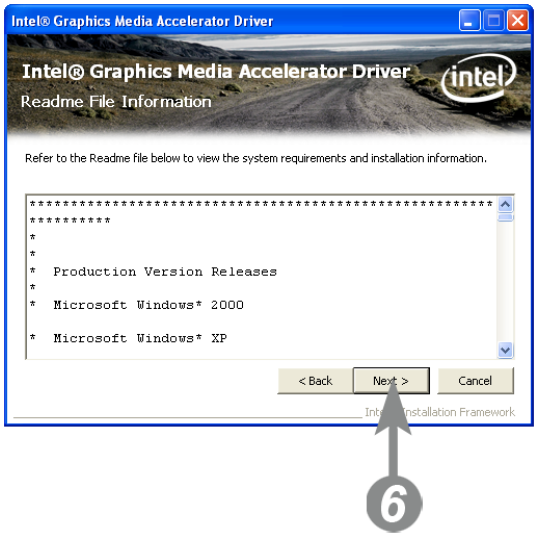
3. Click **VGA Driver for WIN2K/XP**.

4. Click **Next**.

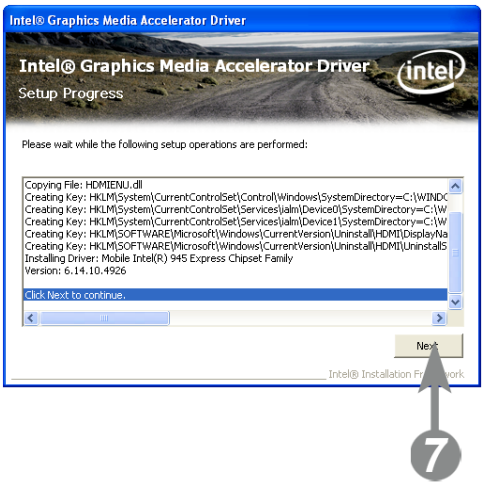
5. Read the License Agreement carefully and click **Yes**.


Intel® Graphics Media Accelerator Driver
Intel® Graphics Media Accelerator Driver
License Agreement
intel
You must accept all of the terms of the license agreement in order to continue the setup program. Do you accept the terms?
INTEL SOFTWARE LICENSE AGREEMENT (OEM / IHV / ISV Distribution & Single User)
IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.
Do not use or load this software and any associated materials (collectively, the "Software") until you have carefully read the following terms and conditions. By loading or using the Software, you agree to the terms of this Agreement. If you do not wish to so agree, do not install or use the Software.
Please Also Note:
* If you are an Original Equipment Manufacturer (OEM), Independent Hardware Vendor (IHV), or Independent Software Vendor (ISV), this complete LICENSE AGREEMENT applies;
< Back
Yes
No
5

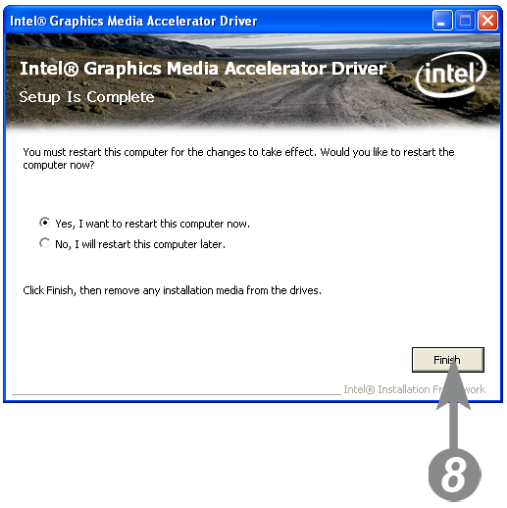
6. Click **Next**.



7. Click **Next**.



8. Select restart your computer right now or later, and then lick **Finish**.

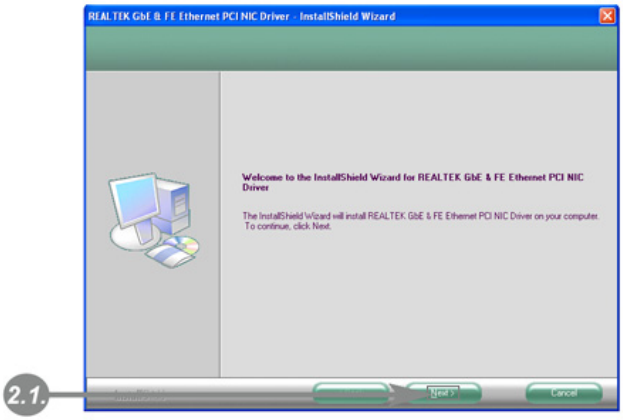

Intel® Graphics Media Accelerator Driver
Intel® Graphics Media Accelerator Driver
Setup Is Complete
You must restart this computer for the changes to take effect. Would you like to restart the computer now?
Yes, I want to restart this computer now.
No, I will restart this computer later.
Click Finish, then remove any installation media from the drives.
Finish
8

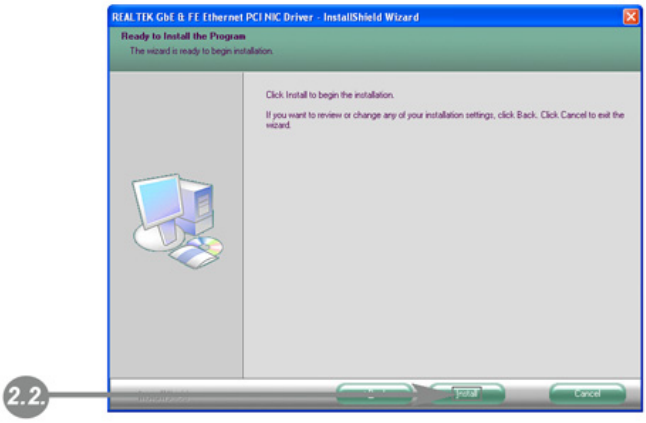
4.4. LAN Driver Installation

1. On the main screen, click **RTL8111C Lan Driver**.

2.1. On the welcome screen, click **Next**.

2.2. Click Install to begin the installation.

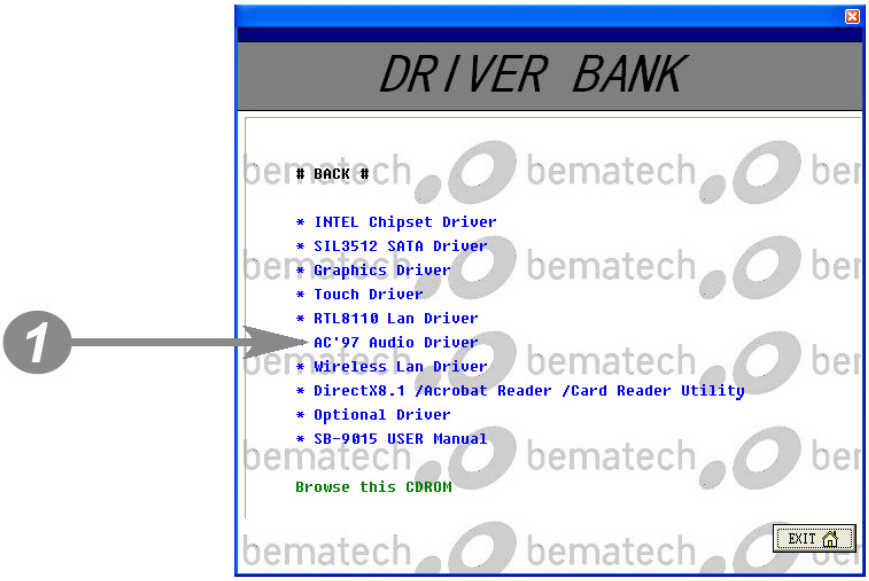

REALTEK GbE & FE Ethernet PCI NIC Driver - InstallShield Wizard
Welcome to the InstallShield Wizard for REALTEK GbE & FE Ethernet PCI NIC Driver
The InstallShield Wizard will install REALTEK GbE & FE Ethernet PCI NIC Driver on your computer. To continue, click Next.
2.1.


REALTEK GbE & FE Ethernet PCI NIC Driver - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
2.2.

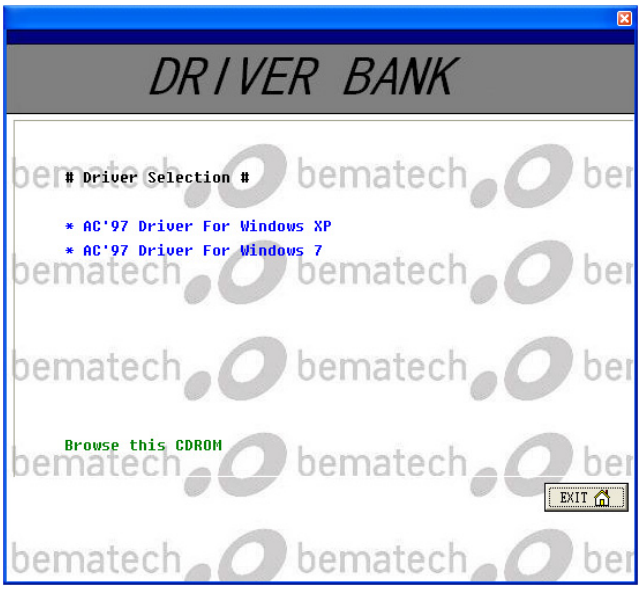
3. Click **Finish**.

4.5. Audio Driver Installation

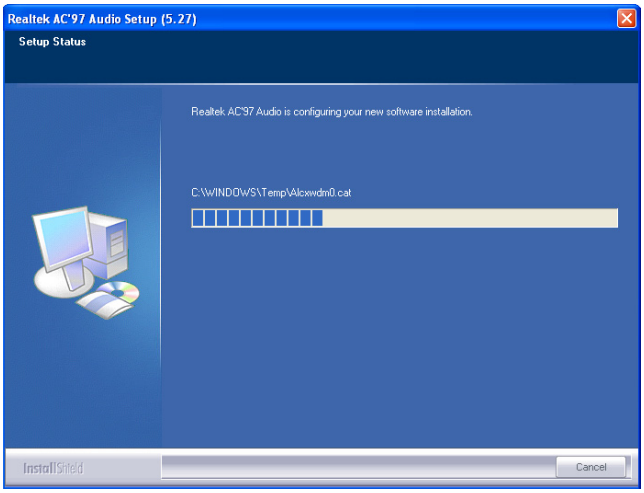
1. Click **AC'97 Audio Driver.**



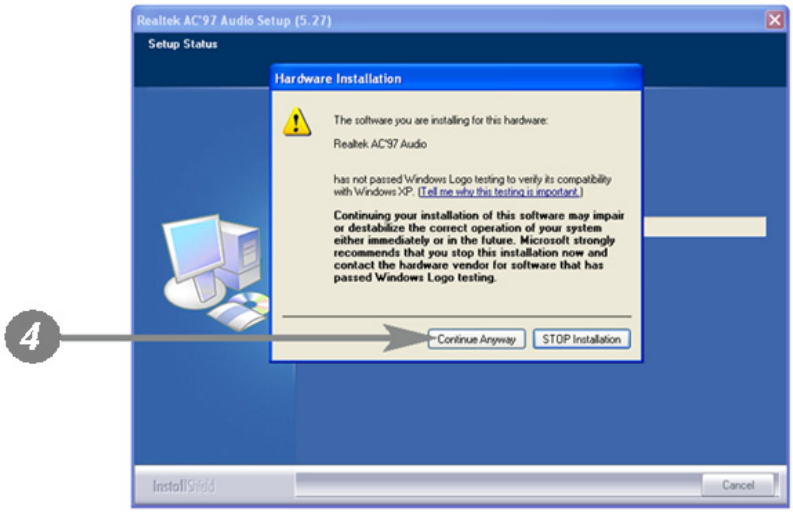
2. Click the right operation system.



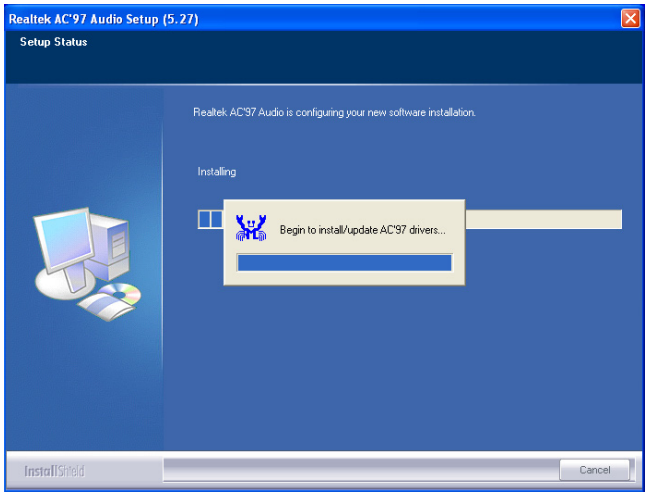
3. Configures new software installation.



4. Click **Configure Anyway**.

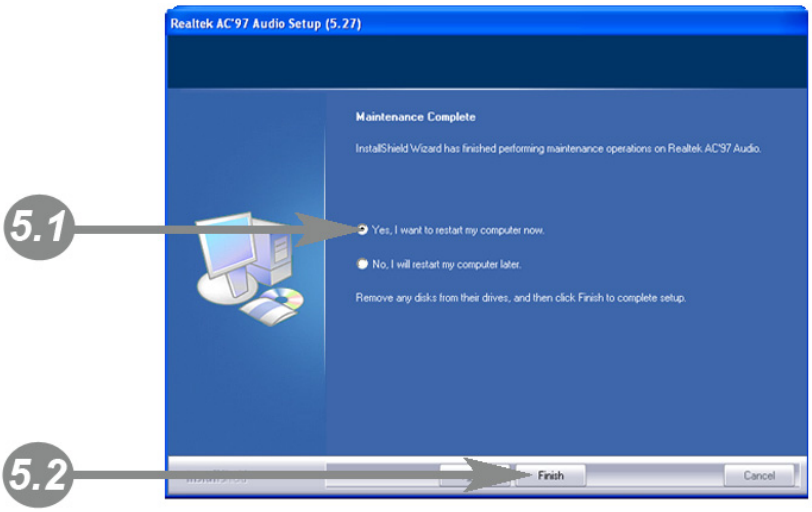

Realtek AC'97 Audio Setup (5.27)
Setup Status
Hardware Installation
The software you are installing for this hardware:
Realtek AC'97 Audio
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
4
Continue Anyway
STOP Installation
InstallShield
Cancel

5. AC'97 drivers begins to install.



5.1. Select restart your computer right now or later.

5.2. Click **Finish**.

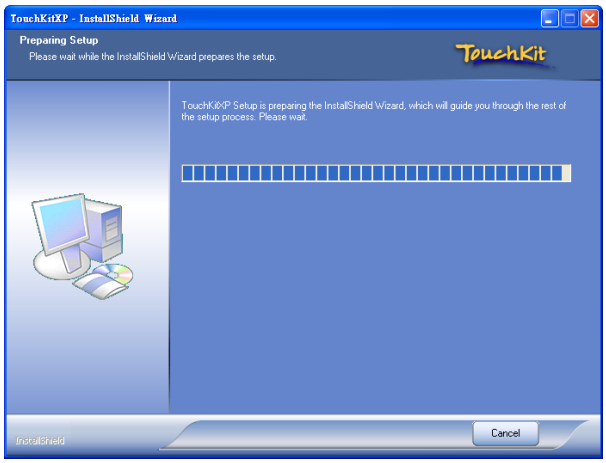

Realtek AC'97 Audio Setup (5.27)
Maintenance Complete
InstallShield Wizard has finished performing maintenance operations on Realtek AC'97 Audio.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
5.1
5.2
Finish
Cancel

4.6 Touch Screen Driver and Software Utility installation

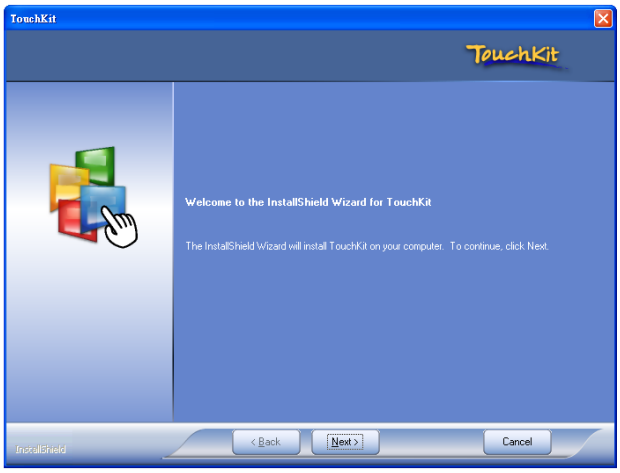
1. On the main screen, click **Touch Panel Driver**..

2. Click **Touch Panel Driver**.

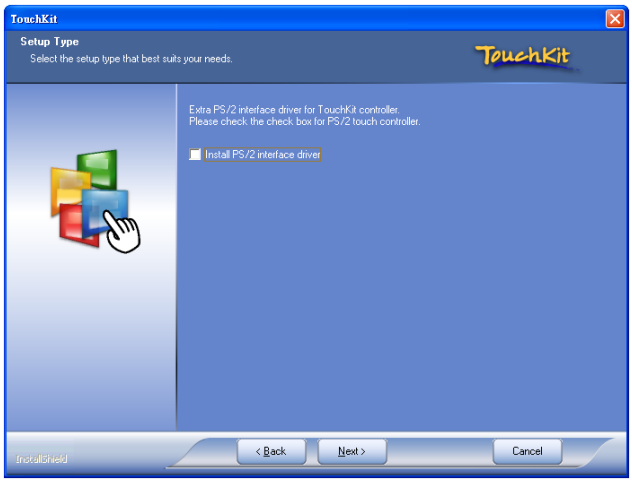
3. The procedure starts.


TouchKitXP - InstallShield Wizard
Preparing Setup
Please wait while the InstallShield Wizard prepares the setup.
TouchKit
TouchKitXP Setup is preparing the InstallShield Wizard, which will guide you through the rest of the setup process. Please wait.
InstallShield
Cancel

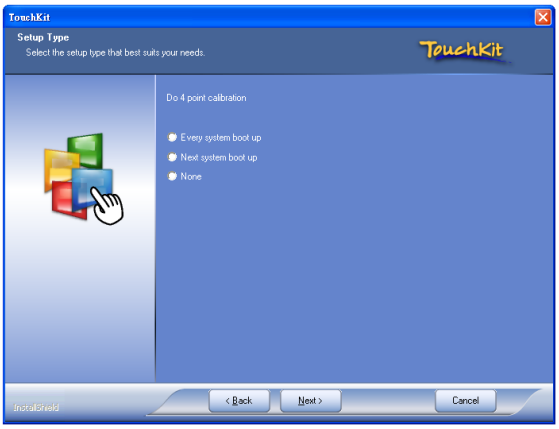
4. Click **Next**.


TouchKit
TouchKit
Welcome to the InstallShield Wizard for TouchKit
The InstallShield Wizard will install TouchKit on your computer. To continue, click Next.
InstallShield
< Back
Next >
Cancel

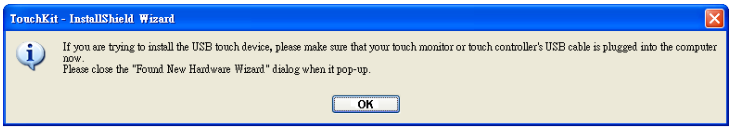
5. Click **Next**.



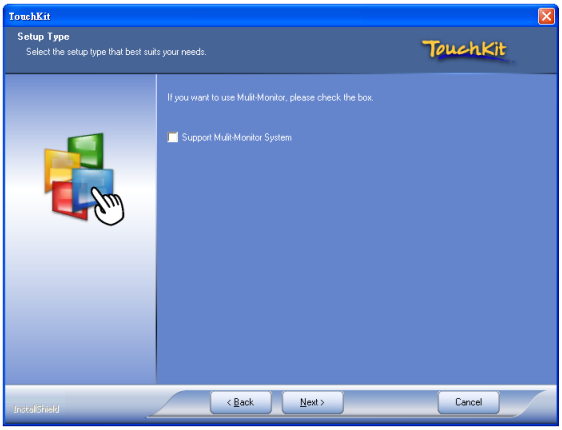
6. Select an item according to your needs, and then click **Next**.



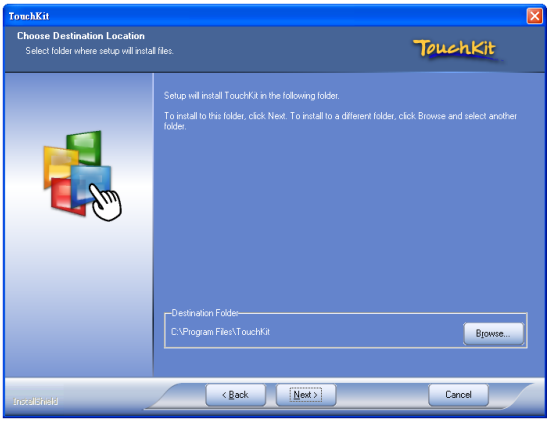
7. Click **OK**.


TouchKit - InstallShield Wizard
If you are trying to install the USB touch device, please make sure that your touch monitor or touch controller's USB cable is plugged into the computer now.
Please close the "Found New Hardware Wizard" dialog when it pop-up.
OK

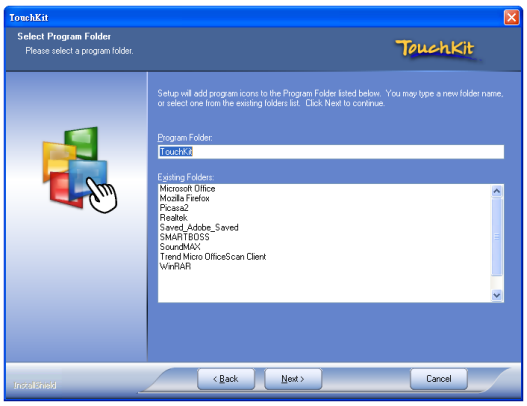
8. If you want to use Multi-Monitor, check the box and click **Next**.



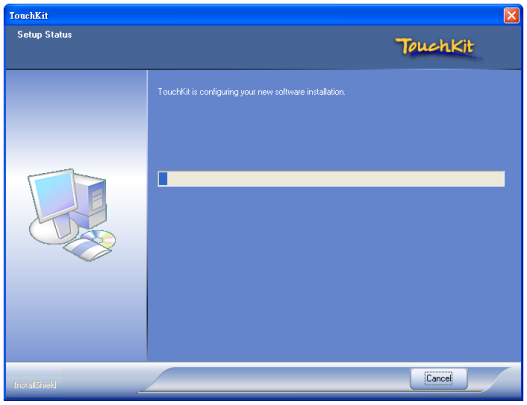
9. Click **Next**.


TouchKit
Choose Destination Location
Select folder where setup will install files.
TouchKit
Setup will install TouchKit in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\Program Files\TouchKit
Browse...
InstallShield
< Back
Next >
Cancel

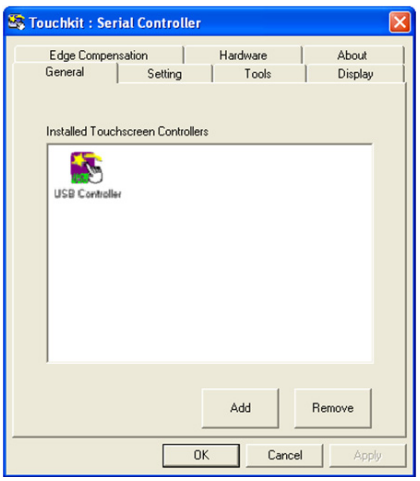
10. Click **Next**.



11. The driver starts to install.



12. Click **OK**.


Touchkit : Serial Controller
Edge Compensation
Hardware
About
General
Setting
Tools
Display
Installed Touchscreen Controllers
USB Controller
Add
Remove
OK
Cancel
Apply

5.

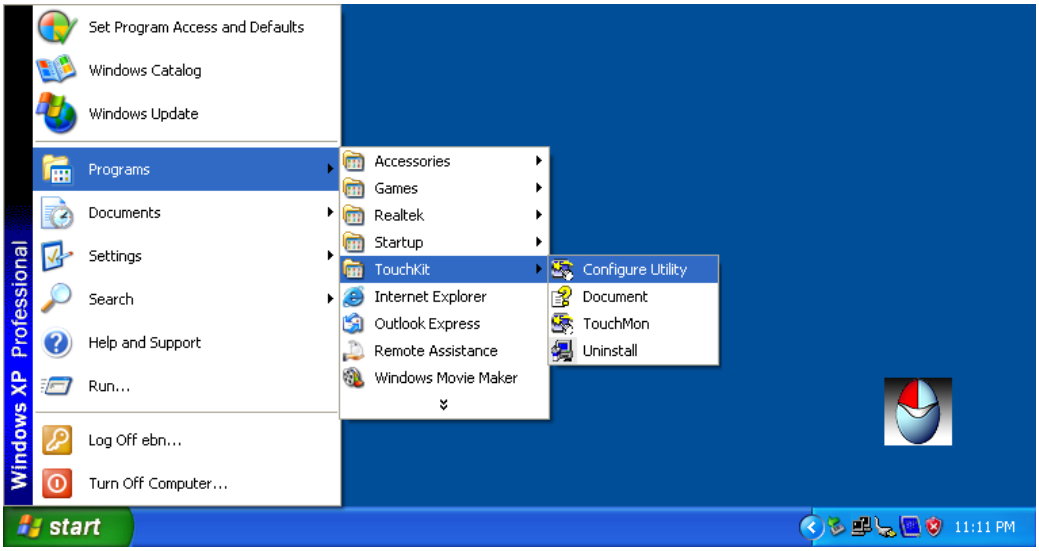
TouchKit Utility Quick Guide

5.1. Launch TouchKit Utility

There are two alternatives to launch **TouchKit**.

Option 1:

Under Microsoft Windows XP, click “**start**” menu and select “**Programs**”, under ”**TouchKit**” menu, click “**Configure Utility**”.

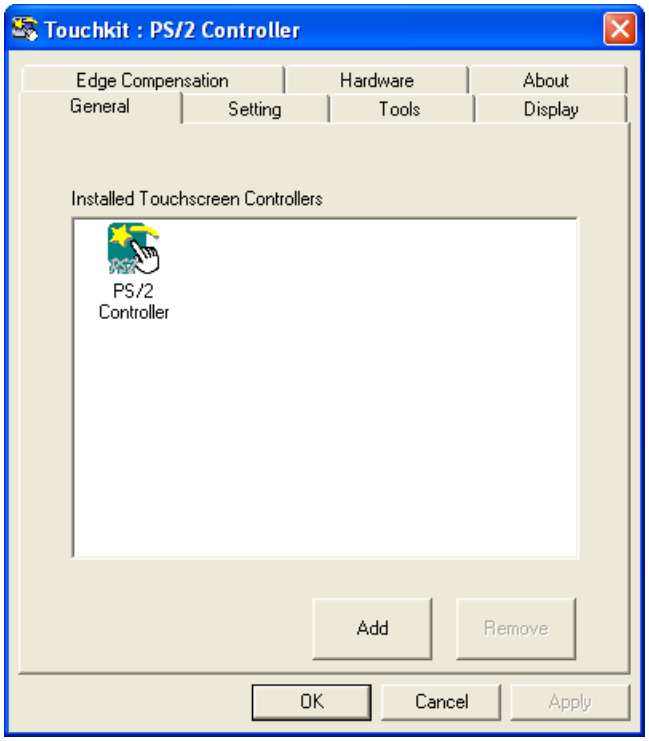


Option 2:

Click icon on the task bar to launch **TouchKit** utility.

5.2. General

The **General** tab in **Touchkit utility** shows all of **TouchKit** touchscreen controllers installed as below, including RS232, USB and PS2 interfaces.



Add

The function button is used for serial RS232 controllers only. Press this button to search the **TouchKit** serial controllers connected with the COM ports of the device. Whenever it finds a new **TouchKit** serial controller, a new serial controller icon object will be shown in the controller list window automatically.

USB **TouchKit** device supports plug and play, the icon object for USB controller will be shown in the controller list window automatically when the USB controller is connected with the USB port of the device. And, the icon object for the USB controller will disappear automatically as soon as the device was removed from the USB port of the device.

TouchKit PS2 driver support PS2 mouse and **TouchKit** touchscreen controller. It can works with both PS2 mouse and **TouchKit** touchscreen PS2 controller. After the **TouchKit** PS2 driver was installed, this utility assumes the PS2 touchscreen controller exists and

is always shown in the controller list window.

Remove

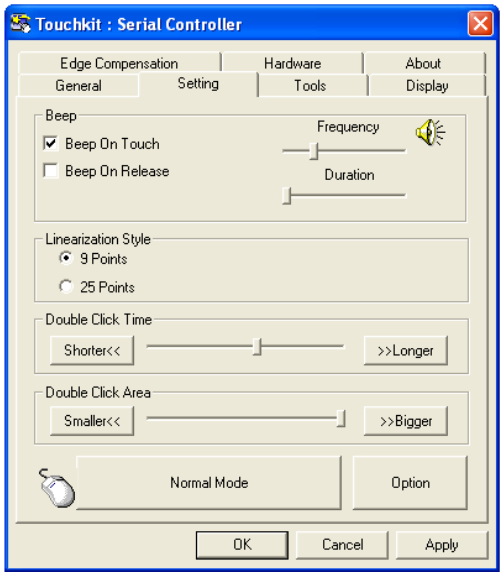
This function button is used for serial RS232 controllers only. This button will be grayed and disabled automatically when the selected controller in the controller list window is not RS232 type. Press to remove and uninstall the selected serial RS232 controller from the device. Then, this serial RS232 icon object in controller list window disappears automatically.

USB TouchKit device supports plug and play, the icon object for USB controller will be shown in the controller list window automatically when the USB controller is connected with the USB port of the device. And, the icon object for the USB controller will disappear automatically as soon as the device was removed from the system USB port.

TouchKit utility does not allow you to remove/uninstall the PS2 device driver dynamically. To uninstall the **TouchKit** PS2 driver, you need to go to Windows Device Manager to do un-installation. In addition, after PS2 un-installation, it needs to reboot the device to complete un-installation.

5.3. Settings

There are function buttons and check boxes in the **Settings** tab.



Beep

Beep On Touch

Check this check box to enable driver to generate a beep sound when touch touchscreen state is switched from untouched to touched state.

Beep On Release

Check this check box to enable driver to generate a beep sound when touchecreen state is switched from touched state to untouched state.

Frequency

Drag the slider to adjust this frequency to control the beep sound frequency generated by the driver.

Duration

Drag the slider to adjust this duration to control the beep sound duration.

Linearization Style

TouchKit utility provides you with both 9 points and 25 points calibration for linearization. You can select the suitable linearization type.

Double Click Time

Double Click Time is used to set double click time. Change this value will affects the double click behavior for all of the mouse devices connected to the device. Two continuous clicks at the same area within this specified time period will be recognized as a double click event.

Double Click Area

Double click area is used to set the double click area. Change this value will affects the double click behavior for all of the mouse devices connected to the device. Two continuous clicks with this specified area in the specified double click time will be recognized as a double click event.

Mouse Emulation Mode

Change the emulation mode by pressing on this button.

Normal Mode

Normal mode behaves mouse button down and mouse move. You can select this mode to select object, and dragging the object.

Click On Touch

With this **Click On Touch** mode, the driver emulates a mouse click event when the touchscreen state was switched from un-touched state to touched state. Then, the driver always generate mouse move event and is tracking the touch position until the touchscreen state switched to un-touch state.

Click On Release

With this **Click On Release** mode, the driver emulates a mouse click event when the touchscreen state was switched from touched state to un-touched state.

Click On Touch without moving cursor

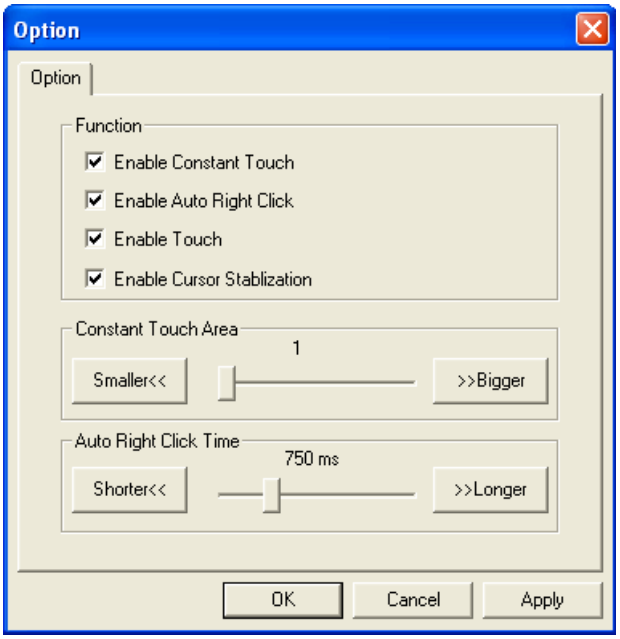
With this mode, the driver behaves similar as **Click On Touch** mode. The cursor does not move to the touch position except the first touch point.

Click On Release without moving cursor

With this mode, the driver behaves similar as **Click On Release** mode. The cursor does not move to the touch position except the lift-off point.

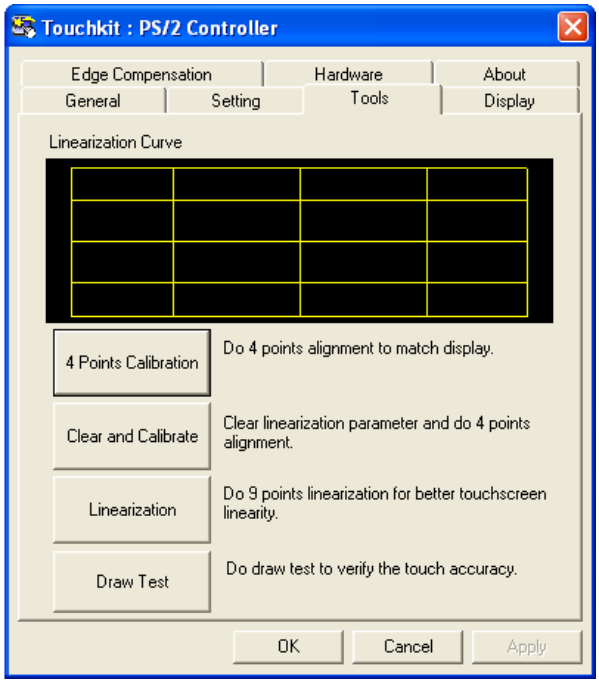
Option

You can set configuration for some advanced functions with this option button. Press this button, a pop up property sheet window will be popped up and shown as below.



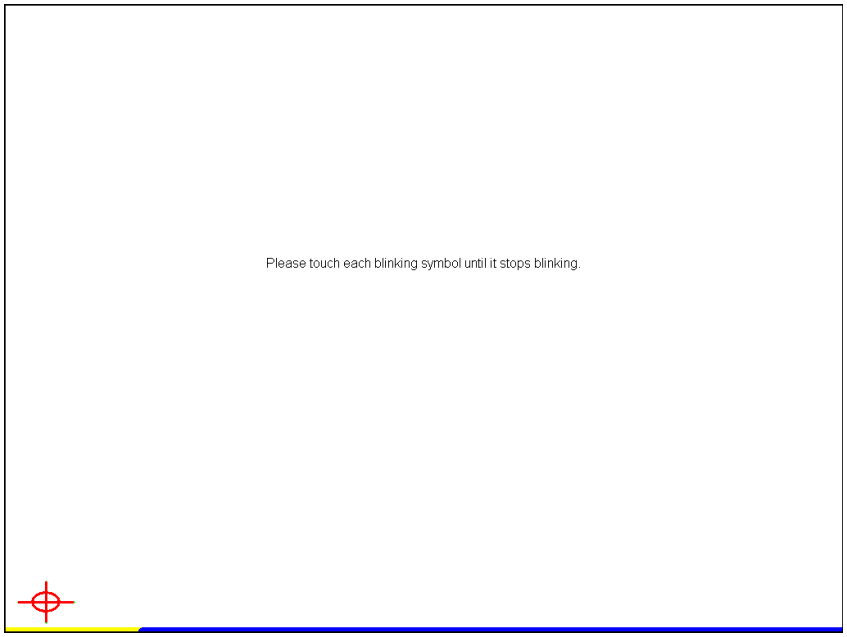
5.4. Tools

There are function buttons and check boxes in the **Tools** tab.



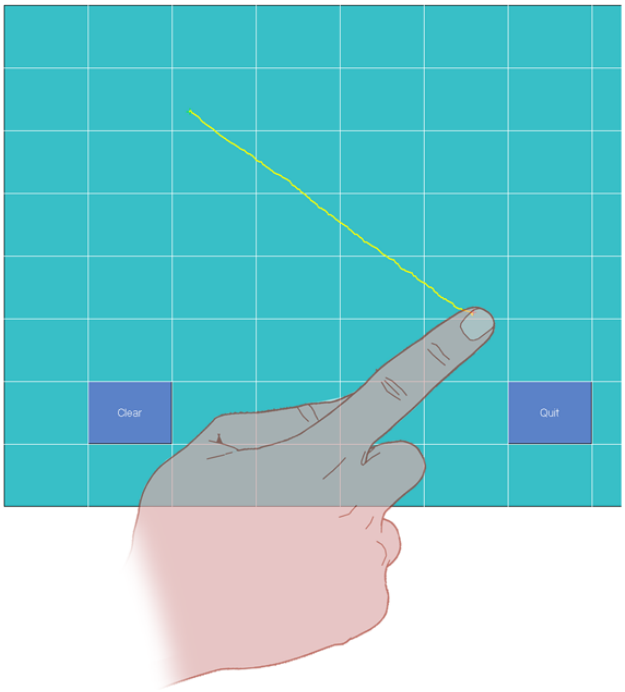
4 Points Calibration, Clear and Calibration, and Linearization button

Click the one of three these buttons and follow the instruction on the screen to do the screen calibration.



Draw Test

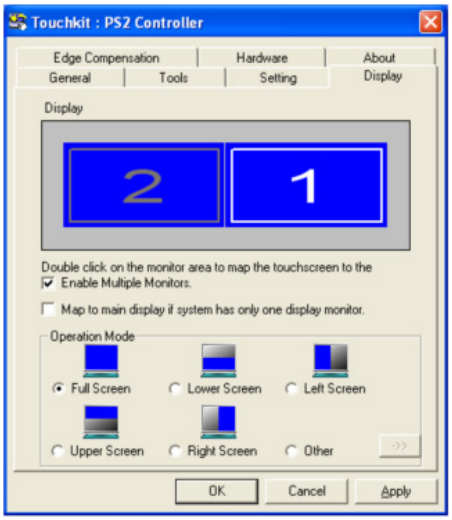
After clicking this button, you can do the drawing test by drawing any path on the screen as shown below.



You can remove all paths you drew by clicking **Clear**, or exit this screen by clicking **Quit**.

5.5. Display

TouchKit driver utility supports multiple monitor and display system. To work with multiple monitor system, you need to do proper configuration to map the touchscreen working area to the correct system display area. You can do such configuration with this property page shown as below,



Please follow below instructions to do the configuration:

Enable multiple monitor

Check this check box to enable multiple monitor support and uncheck it to disable multiple monitor support. When this function is disabled, the touchscreen will be mapped to the primary monitor automatically.

When this function is enabled, user can double click on the monitor area in the monitor geometry window to assign the monitor area where the touchscreen will be mapped. In other word, the touchscreen will work with the selected monitor. Then, the selected monitor area rectangle line will be changed to be white and the other monitor rectangles line will be grey.

Map to main monitor when the system has only one monitor

When the multiple monitor function was enabled, and the system has only one monitor.

Driver allows user to generate the mouse event for the primary monitor or not when the touchscreen which were not mapped to primary monitor. Check the check box to enable this function, then, the driver will generate the mouse event for the primary monitor even through the touchscreen was configured as other monitor mapping and multiple monitor function enabled.

Operation Mode

TouchKit driver support split display mode for those applications which do not map the touchscreen to the full screen of the monitor.

Full screen

The touchscreen will be mapped to the full screen of the specified monitor.

Right screen

The touchscreen will be mapped to the right half screen of the specified monitor.

Left screen

The touchscreen will be mapped to the left half screen of the specified monitor.

Upper screen

The touchscreen will be mapped to the upper half screen of the specified monitor.

Lower screen

The touchscreen will be mapped to the lower half screen of the specified monitor.

Other operation mode

Quarter 1

The touchscreen will be mapped to the first quarter area of the specified monitor display.

Quarter 2

The touchscreen will be mapped to the 2nd quarter area of the specified monitor display.

Quarter 3

The touchscreen will be mapped to the 3rd quarter area of the specified monitor display.

Quarter 4

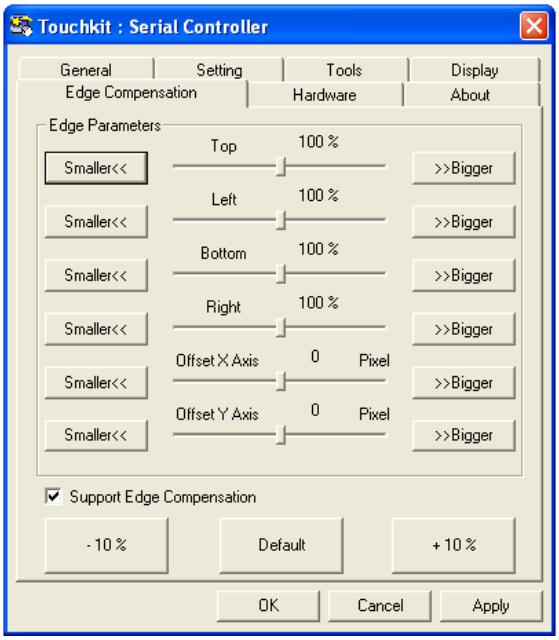
The touchscreen will be mapped to the 4th quarter area of the specified monitor display.

Customized

If the touchscreen needs to be mapped the area other than the above area, user can define the mapping area for application. With this mode, the driver does not correct the mapping area when the display resolution changed. It needs to do configuration setting again whenever the display resolution changed.

5.6. Edge Compensation

Edge Compensation property page contains functions of **Edge Compensation** for Top, Bottom, Left, Right, X Axis and Y Axis.



In some cases, if it is difficult to touch items at the edges of the touch panel, you can set adjustment to reach the edges of the screen image.

Top

If you set the Edge to "Smaller", **TouchKit** will reduce the horizontal position of the top edge. If you set the Edge to "Larger", **TouchKit** will extend the horizontal position of the top edge.

Bottom

If you set the Edge to "Smaller", **TouchKit** will reduce the horizontal position of the bottom edge. If you set the Edge to "Larger", **TouchKit** will extend the horizontal position of the bottom edge.

Left

If you set the Edge to "Smaller", **TouchKit** will reduce the vertical

position of the right edge. If you set the Edge to "Larger", **TouchKit** will extend the vertical position of the left edge.

Right

If you set the Edge to "Smaller", **TouchKit** will reduce the vertical position of the right edge. If you set the Edge to "Larger", **TouchKit** will extend the vertical position of the right edge.

In some cases, cursor will be behind the finger when you touch the panel. If you can not see the cursor when you touch down the panel, you can set **X Axis** or **Y Axis** to move the cursor.

Offset X Axis

If you set the Offset X Axis to Smaller, cursor will be moved a pixel of X Axis to left.

If you set the Offset X Axis to Larger, cursor will be moved a pixel of X Axis to right.

Offset Y Axis

If you set the Offset Y Axis to Smaller, cursor will be moved a pixel of Y Axis to top.

If you set the Offset Y Axis to Larger, cursor will be moved a pixel of X Axis to bottom.

Edge Compensation Switch

You can check **Support Edge Compensation** check box to enable/disable this function from left corner.

Edge Compensation Button

Click **+10%** or **-10%** button to adjust the smaller or larger of edge. If you click **+10%** button, the top, bottom, left and right edges will extend 10% of orientation to touch screen, and cursor will be moved

10 pixel of X and Y Axis to right and top.

If you click **-10%** button, the top, bottom , left and right edges will contract 10% of orientation to touch screen, and cursor will be moved 10 pixel of X and Y Axis to left and bottom.

Click **Default** button to resume to the default value.

6.

I/O Definition

Please refer the detailed technical information about all I/O ports as followings.

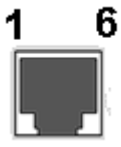
6.1. Power Connector

PIN	Description	PIN	Description
1	+12V	3	GROUND
2	+12V	4	GROUND

6.2. Serial Port

COM Port 1/2/5/6			
PIN	Description	PIN	Description
1	DCD	6	DSR
2	RXD	7	RTS
3	TXD	8	CTS
4	DTR	9	RI / 5V /12V
5	GND	10	NC

6.3. Cash Drawer



Connector

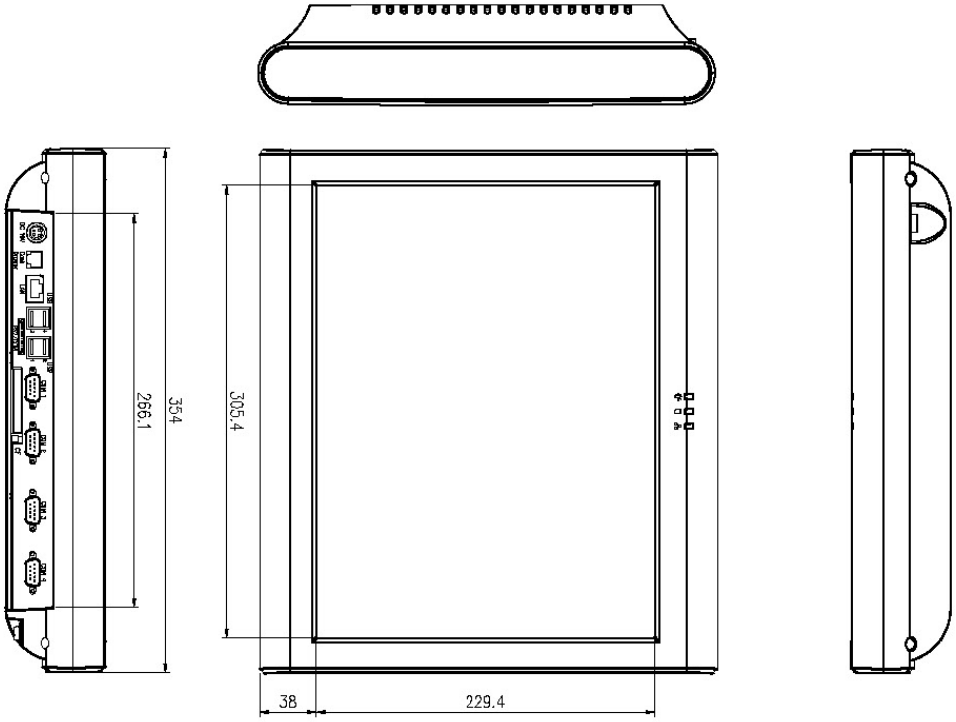
PIN	Description	PIN	Description
1	GND	4	D_IN
2	NC	5	D_OUT
3	VCC	6	GND

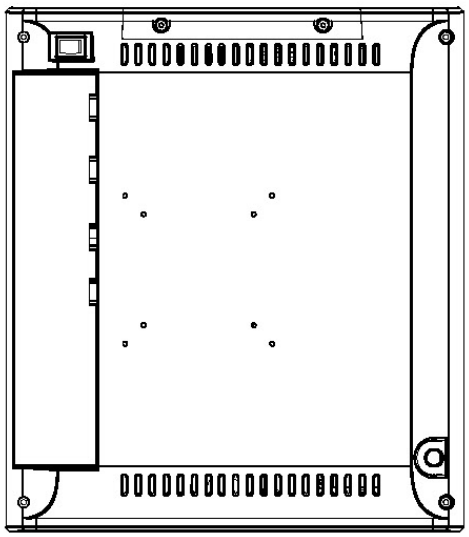
Cash Drawer Control

Status	Address	Value
Open	280H	Bit 4 = 1
Close	280H	Bit 4 = 0
Read Status	281H	Bit 0 = 0/1

7.

Specification





TOLERANCES	
.X ± 0.2	.X° ± 0.25
.XX ± 0.1	.X° ± 0.15
.XXX ± 0.05	.XX° ± 0.05

Main Board	
CPU	Intel Atom™ Processor N270 1.6GHz
Chipset	Intel 945GSE / ICH7-M
System Memory	SO-DIMM DDR2, up to 2GB
Thermal Solution	Fan-less
OS	WinXP, WEPOS, WinCE.Net 5.0, Linux (Fedora Core 5, Suse 9), POS Ready
Storage Device	
HDD	1 x 2.5” HDD Drive Bay
Compact Flash	1 x Slot Compact Flash Type II
I/O Ports	
Serial	5 x RS-232, 1 x RS-232/422/485 COM1: DB-9, RS-232/422/485 COM2/5/6: DB-9, RS-232 COM3: Internal Pin Header COM4: Internal for Touch Panel Pin9 w/ RI/5V/12V Selectable by BIOS
USB	4 x USB 2.0
LAN	1 x Gigabit Ethernet by RJ-45
Cash Drawer	1 x 6-PIN RJ-11 (12V DC)
Audio	AC’ 97 2.0 Compliant, 2W Speaker * 2
Others	
Power Supply	External adapter, 80W, 12V DC input
EMC Compliance	FCC / CE
Net Weight	6.8 kg
Material	Front bezel - Plastic Rear cover - Die-Casting Aluminum
Product Dimension	354 x 358 x 232 mm (WxHxD)
Carton Dimension	540 x 500 x 400 mm (WxHxD)
W-LAN (Option)	802.11g Wireless LAN module
Operating Temperature	0°C – 40°C
Storage Temperature	-20°C – 60 °C
Humidity	20% – 85% RH, non-condensing